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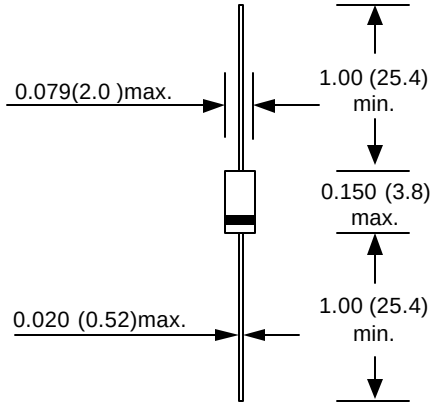
# BZX55C2V4 ~ BZX55C200

# SILICON ZENER DIODES

**$V_Z$ : 2.4 - 200 Volts**
**$P_D$ : 500 mW**

## DO - 35




**Dimensions in inches and ( millimeters )**

## FEATURES :

* Complete 2.4 to 200 Volts
* High surge current capability
* High peak reverse power dissipation
* High reliability
* Low leakage current

## MECHANICAL DATA

* Case : Molded glass
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Polarity : Color band denotes cathode end. When operated in zener mode, cathode will be positive with respect to anode
* Mounting position : Any
* Weight : 0.13 gram

## MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

| Rating | Symbol | Value | Unit |
|---|---|---|---|
| Power Dissipation (Note) | $P_D$ | 500 | mW |
| Maximum Forward Voltage at $I_F$ =100 mA | $V_F$ | 1.0 | V |
| Maximum Thermal Resistance Junction to Ambient Air (Note1) | $R\theta JA$ | 0.3 | K / mW |
| Junction Temperature Range | $T_j$ | - 55 to + 175 | °C |
| Storage Temperature Range | $T_s$ | - 55 to + 175 | °C |

**Note** : 1. Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

**UPDATE : JANUARY 18, 2002**

# ELECTRICAL CHARACTERISTICS

Rating at = 25 °C ambient temperature unless otherwise specified

| TYPE Number | Zener Voltage $V_Z$ @ $I_{ZT}$ | | | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | | Temp. coefficient of Zener Voltage |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Nom [1] (V) | Min [2] (V) | Max [2] (V) | $I_{ZT}$ (mA) | $Z_{ZT}$ @ $I_{ZT}$ (Ohms) | $Z_{Zk}$ @ $I_{ZK}$ (Ohms) | $I_{ZK}$ (mA) | $I_R$ (µA) | $I_R$ [2] at $V_R$ (µA) | (V) | $TK_{VZ}$ (% / K) |
| **BZX55C2V4** | 2.4 | 2.28 | 2.56 | 5 | 85 | 600 | 1 | 50 | 100 | 1 | -0.09...-0.06 |
| **BZX55C2V7** | 2.7 | 2.5 | 2.9 | 5 | 85 | 600 | 1 | 10 | 50 | 1 | -0.09...-0.06 |
| **BZX55C3V0** | 3.0 | 2.8 | 3.2 | 5 | 85 | 600 | 1 | 4 | 40 | 1 | -0.08...-0.05 |
| **BZX55C3V3** | 3.3 | 3.1 | 3.5 | 5 | 85 | 600 | 1 | 2 | 40 | 1 | -0.08...-0.05 |
| **BZX55C3V6** | 3.6 | 3.4 | 3.8 | 5 | 85 | 600 | 1 | 2 | 40 | 1 | -0.08...-0.05 |
| **BZX55C3V9** | 3.9 | 3.7 | 4.1 | 5 | 85 | 600 | 1 | 2 | 40 | 1 | -0.08...-0.05 |
| **BZX55C4V3** | 4.3 | 4.0 | 4.6 | 5 | 75 | 600 | 1 | 1 | 20 | 1 | -0.06...-0.03 |
| **BZX55C4V7** | 4.7 | 4.4 | 5.0 | 5 | 60 | 600 | 1 | 0.5 | 10 | 1 | -0.05...+0.02 |
| **BZX55C5V1** | 5.1 | 4.8 | 5.4 | 5 | 35 | 550 | 1 | 0.1 | 2 | 1 | -0.02...+0.02 |
| **BZX55C5V6** | 5.6 | 5.2 | 6.0 | 5 | 25 | 450 | 1 | 0.1 | 2 | 1 | -0.05...+0.05 |
| **BZX55C6V2** | 6.2 | 5.8 | 6.6 | 5 | 10 | 200 | 1 | 0.1 | 2 | 2 | 0.03...0.06 |
| **BZX55C6V8** | 6.8 | 6.4 | 7.2 | 5 | 8 | 150 | 1 | 0.1 | 2 | 3 | 0.03...0.07 |
| **BZX55C7V5** | 7.5 | 7.0 | 7.9 | 5 | 7 | 50 | 1 | 0.1 | 2 | 5 | 0.03...0.07 |
| **BZX55C8V2** | 8.2 | 7.7 | 8.7 | 5 | 7 | 50 | 1 | 0.1 | 2 | 6.2 | 0.03...0.08 |
| **BZX55C9V1** | 9.1 | 8.5 | 9.6 | 5 | 10 | 50 | 1 | 0.1 | 2 | 6.8 | 0.03...0.09 |
| **BZX55C10** | 10 | 9.4 | 10.6 | 5 | 15 | 70 | 1 | 0.1 | 2 | 7.5 | 0.03...0.10 |
| **BZX55C11** | 11 | 10.4 | 11.6 | 5 | 20 | 70 | 1 | 0.1 | 2 | 8.2 | 0.03...0.11 |
| **BZX55C12** | 12 | 11.4 | 12.7 | 5 | 20 | 90 | 1 | 0.1 | 2 | 9.1 | 0.03...0.11 |
| **BZX55C13** | 13 | 12.4 | 14.1 | 5 | 26 | 110 | 1 | 0.1 | 2 | 10 | 0.03...0.11 |
| **BZX55C15** | 14 | 13.8 | 15.6 | 5 | 30 | 110 | 1 | 0.1 | 2 | 11 | 0.03...0.11 |
| **BZX55C16** | 16 | 15.3 | 17.1 | 5 | 40 | 170 | 1 | 0.1 | 2 | 12 | 0.03...0.11 |
| **BZX55C18** | 18 | 16.8 | 19.1 | 5 | 50 | 170 | 1 | 0.1 | 2 | 13 | 0.03...0.11 |
| **BZX55C20** | 20 | 18.8 | 21.2 | 5 | 55 | 220 | 1 | 0.1 | 2 | 15 | 0.03...0.11 |
| **BZX55C22** | 22 | 20.8 | 23.3 | 5 | 55 | 220 | 1 | 0.1 | 2 | 16 | 0.04...0.12 |
| **BZX55C24** | 24 | 22.8 | 25.6 | 5 | 80 | 220 | 1 | 0.1 | 2 | 18 | 0.04...0.12 |
| **BZX55C27** | 27 | 25.1 | 28.9 | 5 | 80 | 220 | 1 | 0.1 | 2 | 20 | 0.04...0.12 |
| **BZX55C30** | 30 | 28 | 32 | 5 | 80 | 220 | 1 | 0.1 | 2 | 22 | 0.04...0.12 |
| **BZX55C33** | 33 | 31 | 35 | 5 | 80 | 220 | 1 | 0.1 | 2 | 24 | 0.04...0.12 |
| **BZX55C36** | 36 | 34 | 38 | 5 | 80 | 220 | 1 | 0.1 | 2 | 27 | 0.04...0.12 |
| **BZX55C39** | 39 | 37 | 41 | 2.5 | 90 | 500 | 0.5 | 0.1 | 5 | 30 | 0.04...0.12 |
| **BZX55C43** | 43 | 40 | 46 | 2.5 | 90 | 500 | 0.5 | 0.1 | 5 | 33 | 0.04...0.12 |
| **BZX55C47** | 47 | 44 | 50 | 2.5 | 110 | 600 | 0.5 | 0.1 | 5 | 36 | 0.04...0.12 |
| **BZX55C51** | 51 | 48 | 54 | 2.5 | 125 | 700 | 0.5 | 0.1 | 10 | 39 | 0.04...0.12 |
| **BZX55C56** | 56 | 52 | 60 | 2.5 | 135 | 700 | 0.5 | 0.1 | 10 | 43 | 0.04...0.12 |
| **BZX55C62** | 62 | 58 | 66 | 2.5 | 150 | 1000 | 0.5 | 0.1 | 10 | 47 | 0.04...0.12 |
| **BZX55C68** | 68 | 64 | 72 | 2.5 | 200 | 1000 | 0.5 | 0.1 | 10 | 51 | 0.04...0.12 |
| **BZX55C75** | 75 | 70 | 79 | 2.5 | 250 | 1000 | 0.5 | 0.1 | 10 | 56 | 0.04...0.12 |
| **BZX55C82** | 82 | 77 | 87 | 2.5 | 300 | 1500 | 0.25 | 0.1 | 10 | 62 | 0.05...0.12 |
| **BZX55C91** | 91 | 85 | 96 | 1 | 450 | 2000 | 0.1 | 0.1 | 10 | 68 | 0.05...0.12 |
| **BZX55C100** | 100 | 94 | 106 | 1 | 450 | 5000 | 0.1 | 0.1 | 10 | 75 | 0.05...0.12 |
| **BZX55C110** | 110 | 104 | 116 | 1 | 600 | 5000 | 0.1 | 0.1 | 10 | 82 | 0.05...0.12 |
| **BZX55C120** | 120 | 114 | 127 | 1 | 800 | 5500 | 0.1 | 0.1 | 10 | 91 | 0.05...0.12 |
| **BZX55C130** | 130 | 124 | 141 | 1 | 950 | 6000 | 0.1 | 0.1 | 10 | 100 | 0.05...0.12 |
| **BZX55C150** | 150 | 138 | 156 | 1 | 1250 | 6500 | 0.1 | 0.1 | 10 | 110 | 0.05...0.12 |
| **BZX55C160** | 160 | 153 | 171 | 1 | 1400 | 7000 | 0.1 | 0.1 | 10 | 120 | 0.05...0.12 |
| **BZX55C180** | 180 | 168 | 191 | 1 | 1700 | 8500 | 0.1 | 0.1 | 10 | 130 | 0.05...0.12 |
| **BZX55C200** | 200 | 188 | 212 | 1 | 2000 | 10000 | 0.1 | 0.1 | 10 | 150 | 0.05...0.12 |

**Note** 1) Tested with pulses tp = 20 ms

2) Valid Provided that leads are kept at ambient temperature at a distance of 8 mm from case